

# A KEY TO THE SPECIES OF PROSPALTELLA, WITH TABLE OF HOSTS, AND DESCRIPTIONS OF FOUR NEW SPECIES.

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The genus *Prospalta*, of the subfamily Aphelininae, was founded by the writer in 1894 (*Insect Life*, Vol. VII, p. 6) for *P. murtfeldtii* How., a parasite of *Aspidiotus uvae* and other Diaspine scales. Since that time other species have been described by Zehntner, Masi, Girault and the writer. Ashmead, noticing that the generic *Prospalta* was preoccupied in Lepidoptera (Walker, 1857,) proposed as a substitute the name *Prospaltella* in Proceedings Entomological Society of Washington, Vol. VI, p. 126, 1904. The descriptions are so widely separated in different publications that, for the sake of convenience in determination work, the following synoptical key has been drawn up. Masi, in Vol. III, of his important *Contribuzioni all Conoscenza dei Calcididi Italiani* (Portici, 1908), gives it as his opinion that *P. tristis* Zehnt., belongs rather to the genus *Coccophagus*; but the writer fortunately possesses cotypes of this species sent him by Doctor Zehntner, and is able to state that the species was correctly placed by its describer.

## Genus *Prospaltella* Ashmead, 1904.

### *Prospalta* Howard, 1894 (preoccupied).

1. Forewing with a trace of a very short pointed marginal vein, its lower margin curving strongly towards base of wing and then outwards to form outer border of stigmal. . . . . *similis* Masi
- Forewing with upper margin of stigmal vein reaching wing margin at a point very slightly distad of its slightly reentering curve, thus faintly indicating a post marginal. . . . . 2
- Forewing without the slightest tendency towards a post marginal . . . . . 3
2. Forewings nearly hyaline, sometimes very faintly dusky below marginal vein, occiput yellow. . . . . *koebelei* n. sp.
- Forewing with a very pronounced broad dark band below marginal vein, occiput with a broad transverse black band. . . . . *quercicola* n. sp.
3. Upper margin of stigmal vein reaching wing margin by a gradual proximal curve. . . . . 4
- Marginal vein squarely truncate, stigmal proceeding from anal portion of truncation. . . . . *maculata* How.
- Marginal vein convexly truncate, upper margin of stigmal nearly parallel with wing margin. . . . . 5
4. Flagellum of antennae distinctly clavate. . . . . 6
- Flagellum nearly filiform . . . . . 7
5. Wings nearly hyaline, only very faintly infuscated; legs uniformly pallid; antennae concolorous. . . . . *tristis* Zehnt.
- Wings with a pronounced infuscated patch below marginal vein; legs and antennae banded. . . . . 9
- Wings nearly uniformly infuscated, legs banded, flagellum dark with slightly lighter tip to club . . . . . *fuscipennis* Girault.

6. Wings with a broad dusky band below marginal vein; abdomen yellow with brown transverse band just caudad of middle. . . . . *citrella* n. sp.  
Wings hyaline. . . . . 8
7. Joints 1 and 2 of funicle distinctly shorter than joint 3. . . . . *berlesei* How.  
Joints 1, 2 and 3 of funicle subequal in length . . . . . *conjugatus* Masi.
8. Abdomen dusky, remainder of body yellow with occasional darker markings . . . . . *aurantii* How.  
Head and thorax dark brown, nearly black; mesoscutellum lighter and abdomen with light patch in center above. . . . . *brunnea* n. sp.
9. Hindwings with two rows of discal cilia . . . . . *murtfeldtii* How.  
Disc of hindwings rather densely ciliate. . . . . *fasciiventris* Girault.

## NEW SPECIES.

*Prospaltella quercicola* n. sp. ♀.

Female.—Length, 0.73 mm.; expanse, 1.53 mm.; greatest width of forewing, 0.26 mm.; antennae subfiliform; all funicle and club joints subequal in length and width; eyes very faintly hairy; forewing with the upper margin of stigmal vein reaching wing margin at a point very slightly distad of its slightly reentering curve, thus faintly indicating a postmarginal vein; abdomen and metanotum piceous; pronotum and front of mesoscutum, as well as propleura and mesopleura, also piceous; vertex of head bright lemon yellow; ocelli crimson; occiput black; all legs pallid except hind femora and trochanters, which are dark brown; antennae pallid yellow except terminal joint of club, which is fuscous; hind portion of mesoscutum, including all of the parapsides, lemon yellow; mesoscutellum nearly white; wings with a broad, well-defined dark fuscous band extending entirely across the wing from the submarginal and stigmal veins.

U. S. N. M. type No. 12163. Described from 14 female specimens reared by R. S. Woglum, of the Bureau of Entomology, U. S. Dept. Agric., April, 1908, from *Aleyrodes gelatinosus* Cock'll, on Oak, Los Angeles, Cal.

*Prospaltella koebelei* n. sp. ♀.

Female.—Length, 0.65 mm.; expanse, 1.65 mm.; greatest width of forewings, 0.26 mm.; antennae long, almost filiform; joint 1 of funicle slightly shorter than pedicel and only half as long as joint 2; joints 2 and 3 and basal joint of club subequal in length, the basal end of the club being slightly wider, joint 2 of club a little more than half as long as joint 1, terminal joint slightly longer; stigmal vein of forewing resembling that of the preceding species. Abdomen and pronotum brown; head entirely yellow; ocelli red; meso- and meta-notum dark yellow; legs pallid except hind femora, which are dusky; antennae yellow, pedicel and last two funicle joints darker than the rest; wings nearly hyaline, the disc of the forewing below marginal vein very faintly and indefinitely infuscated.

U. S. N. M. Type No. 12162. Described from 21 female specimens, reared by Albert Koebele, from *Aspidiotus longispina* Morg., Hawaii (Koebele's No. 1122).

*Prospaltella citrella* n. sp.

Female.—Length, 0.72 mm.; expanse 1.7 mm.; greatest width of forewing 0.245 mm. Antennae distinctly clavate, somewhat flattened; funicle joint 1 shorter than 2 and than 3; stigmal vein as with *aurantii*; forewings with a broad infuscate band extending from marginal vein to hinder border of wing. General color bright lemon-yellow; vertex deeper yellow, tending towards orange; eyes black; ocelli crimson; antennae yellow, terminal joint of club darker; all legs pallid; abdomen with a broad, transverse, brown band covering two segments caudad of middle.

Type No. 12164, U. S. N. M. Described from three female specimens reared by Dr. A. W. Morrill, Orlando, Fla., from *Aleyrodes coronatus*.

There is also in the collection of the Bureau of Entomology of the Department of Agriculture one specimen of what seems with little doubt to be this species, reared by Albert Koebel from males of a Kermes on *Quercus undulata* at Nogales, Ariz., May 3, 1897. On the same slide are several specimens of an *Amitus* (Proctotrypidae), and also several shriveled males of an Aphelinine which may possibly belong to the species above described, but their condition will not warrant a description.

***Prospaltella brunnea*, n. sp. ♀.**

Female.—Length 0.85 mm.; expanse 1.7 mm.; greatest width of forewings 0.25 mm.; antennae distinctly clavate; first funicle joint subequal in length to joint 2 and to 3; wings hyaline; mesoscutum and scutellum with delicate hexagonal sculpturing. General color dark brown; mesoscutellum somewhat lighter; center of abdomen above occupied by a large white spot; antennae faintly yellowish; all legs pallid.

Type No. 12165, U. S. N. M. Described from one female specimen reared from *Aleyrodes* sp. (undescribed) on a climbing vine, collected at Bayamon, Porto Rico, January, 1899, by A. Busek. (Bureau of Entomology, No. 8423.)

SPECIES PREVIOUSLY DESCRIBED.

***aurantii*** How.—♀—U. S., China, Australia, Europe.

*Coccophagus aurantii* Howard, *Insect Life* VI, 1894, p. 231.

*Prospalta aurantii* Howard, *Insect Life*, VII, 1894, p. 6.

*Prospalta aurantii* Howard, *Revis. Aphelin. N. A.*, 1895, p. 41, fig. 13.

***berlesei*** How.—♀—Eastern U. S., Italy.

*Prospalta berlesei* Howard, *Entomological News*, October, 1896, pp. 291-2, fig.

*Prospalta berlesei* Masi, *Cont. Conoscenza Chalcididi Italiani* III, pp. 143-5, figs. 40-43, (1908).

***conjugata*** Masi.—♀—Italy.

*Prospalta conjugata* Masi, *Cont. Conoscenza Chalcididi Italiani* III, pp. 146-8, figs. 44-46 (1908).

***fasciiventris*** Girault.—♀—Ills.

*Prospaltella fasciiventris* Girault, *Psyche*, December, 1908

***fuscipennis*** Girault.—♀—U. S.

*Prospaltella fuscipennis* Girault, *Psyche*, December, 1908.

***maculata*** How.—♀—China, California.

*Prospalta maculata* Howard, *New Genera and Species of Aphelininae*, *Tech. Ser. 12, Part IV, U. S. Dept. Agric., Bur. Entom.*, (1907), pp. 79-80, fig. 16.

**murtfeldtii** How.—♀—U. S.

*Prospalta murtfeldtii* Howard, *Insect Life*, VII, 1894, p. 6.

*Prospalta murtfeldtii* Howard, *Revis. Aphelininae N. A.*, 1895, p. 40, fig. 12.

**similis** Masi—♀—Italy.

*Prospalta similis* Masi, *Cont. Conoscenza Chalcididi Italiani*, III, (1908), pp. 148-9, fig. 45.

**tristis** Zehnt.—♀—Java.

*Prospalta tristis* Zehntner, *Med. V. 2 Proefst. Oost-Java n. s. No. 29*, 1896, pp. 11-12, figs. 17-21.

## TABLE OF HOST RELATIONS.

PARASITES.	HOSTS.
aurantii.....	<i>Aonidiella aurantii citrinus</i> (Coq.) <i>Diaspidiotus ancylus</i> (Putn.) <i>Aspidiotus pini</i> Comst. <i>Lepidosaphes beckii</i> (Newm.) <i>Lepidosaphes concolor</i> (Ckll.) <i>Lepidosaphes eucalypti</i> Crawford MS. <i>Chionaspis</i> sp. <i>Aspidiotus hederæ</i> (Vall.) <i>Diaspidiotus juglans-regiæ</i> (Comst.) <i>Diaspidiotus howardi</i> (Ckll.) <i>Lepidosaphes gloverii</i> (Pack.) <i>Diaspidiotus forbesi</i> (Johns.)
murtfeldti.....	<i>Diaspidiotus uvæ</i> (Comst.)
tristis.....	<i>Aleyrodes bergi</i> Sign.
berlesei.....	<i>Diaspis pentagona</i> (Targ.)
maculata.....	<i>Lepidosaphes beckii</i> (Newm.)
conjugata.....	<i>Aleyrodes brassicæ</i> Walk.
similis.....	<i>Diaspidiotus ostreaeformis</i> (Curt.)
quercicola.....	<i>Aleyrodes gelatinosus</i> Cook.
koebeleii.....	<i>Kermes</i> sp. (males)
fuscipennis.....	<i>Chrysomphalus obscurus</i> (Comst.)
citrella.....	<i>Aleyrodes coronatus</i> (Quaintance)
brunnea.....	<i>Aleyrodes</i> sp. (on climbing vine)
fasciiventris.....	? <i>Aspidiotus perniciosus</i> (Comst.) ? <i>Chionaspis furfura</i> (Fitch.) <i>Diaspidiotus forbesi</i> (Johns.) <i>Diaspidiotus aesculi</i> (Johns.) <i>Diaspidiotus juglans-regiæ</i> (Comst.) <i>Aspidiotus</i> sp. on <i>Celtis</i> .